

RONALD J. PETTIS

EDUCATION

1982 - 1986	Georgia Institute of Technology	Atlanta, GA
	<i>B.S. Chemistry cum laude</i>	
1986 - 1988	University of North Carolina	Chapel Hill, NC
	<i>M.S. Chemistry</i>	
1988 - 1991	University of North Carolina	Chapel Hill, NC
	<i>Ph.D. Chemistry</i>	

PROFESSIONAL EXPERIENCE

1996 - Present	BD Technologies	RTP, NC
	<i>Senior Scientist, Team Leader-Therapeutic Drug Delivery</i>	
	■ Wesley J. Howe Award for Corporate Technology Innovation (2001)	
1991 - 1996	University of North Carolina, School of Pharmacy	Chapel Hill, NC
	<i>Research Fellow-Pharmaceutical Formulation and Delivery</i>	

PATENTS

6 issued and 17 pending US Patents:	United States Patent 6,722,364 April 20, 2004 <i>Medicament inhalation delivery devices and methods for using the same</i>
	United States Patent 6,689,100 February 10, 2004 <i>Microdevice and method of delivering or withdrawing a substance through the skin of an animal</i>
	United States Patent 6,656,147 December 2, 2003 <i>Method and delivery device for the transdermal administration of a substance</i>
	United States Patent 6,607,513 August 19, 2003 <i>Device for withdrawing or administering a substance and method of manufacturing a device</i>
	United States Patent 6,595,947 July 22, 2003 <i>Topical delivery of vaccines</i>
	United States Patent 6,440,096 August 27, 2002 <i>Microdevice and method of manufacturing a microdevice</i>

PUBLICATIONS AND PRESENTATIONS

Atty. Docket No.: 11219-008-999

Serial No.: 09/606,909

Exhibit A

Pettis RJ, Knowles MR, Olivier KN, Kazantseva M, Hickey AJ. *Ionic interaction of amiloride and uridine 5'-triphosphate in nebulizer solutions.* J Pharm Sci. 2004 Sep;93(9):2399-406.

Mikszta JA, Alarcon JB, Brittingham JM, Sutter DE, Pettis RJ, Harvey NG. *Improved genetic immunization via micromechanical disruption of skin-barrier function and targeted epidermal delivery.* Nat Med. 2002 Apr;8(4):415-9.

Pettis RJ, Hall I, Costa D, Hickey AJ. *Aerosol delivery of muramyl dipeptide to rodent lungs.* AAPS PharmSci. 2000;2(3):E25.

Pettis RJ, Erickson BW, Forward RB, Rittschof D. *Superpotent synthetic tripeptide mimics of the mud-crab pumping pheromone.* Int J Pept Protein Res. 1993 Oct;42(4):312-9.

Pettis, R.J., Forward, R.B., Erickson, B.W., and Rittschof, D. (1993) *Superpotent Synthetic Tripeptide Mimics of the Mud-Crab Pumping Pheromone*, Int. J. Peptide Protein Res, 42:312-319.

Pettis, R.J., Middleton, B.A., Cho, M.J. (1994) *Preformulation studies of UCN-01: Solubility and stability enhancement by polyvinylpyrrolidone binding*, Pharm. Res., 11:S230.

Pettis, R.J., Becton, B.A., Cho, M.J., Tabibi, E. (1995) *Preformulation studies of sarcosine-chloroethylnitrosourea (SarCNU)*, Proc. Am. Assoc. Canc. Res., 36:311.

Atkins, K.M., Lalor, C.L., Concessio, N.M., Pettis, R.J., Hickey, A.J. (1995) *Aerodynamic size characterization, lung deposition and alveolar macrophage uptake of microparticulate suspension aerosols in guinea pigs*, abstract, 17th Annual Undergraduate Research Seminar, West Virginia University.

Lalor, C.J., Atkins, K.M., Concessio, N.M., Pettis, R.J., Hickey, A.J. (1996) *Lung deposition and alveolar macrophage uptake of microparticulates from suspension aerosols in guinea pigs*, abstract, Society of Toxicology 35th Annual Meeting, Anaheim, CA.

Pettis, R.J., Hickey, A.J. (1996) *Alveolar macrophage activation by muramyl dipeptide aerosols in guinea pigs*: Effects on cellular morphology, poster, AAPS Southeast Regional Meeting, Research Triangle Park, NC.

Pettis, R.J., Hickey, A.J. (1996) *Effect of muramyl dipeptide aerosols on guinea pig alveolar macrophages*, Pharm. Res., 13(9):S166.

Pettis, R.J., Knowles, M.R., Olivier, K.N., Hickey, A.J. (1996) *Ionic interaction of amiloride and uridine-5'-triphosphate (UTP) in solution*, Pharm. Res., 13(9):S179.

Pettis, R.J., Sutter, D., Dekker, J., Bock, R. (2000) *Microfabricated microneedles for disruption of skin barrier function*, poster, 2000 AAPS Annual Meeting and Exposition.

Mikszta, J. Alarcon, J. M. Brittingham, J. P. Dekker, R. J. Pettis, N. G. Harvey *Microdevice-Based Topical Delivery of DNA and Subunit Vaccines.*

AAPS PharmSci Vol. 2, No. 2, Abstract 2307 (2000)

Pettis, R.J., Haider, I., Mikszta, J., Alarcon, J., Brittingham, J.M., Davison, N., Solbrig, C., Zahn, J. (2001) *Hollow microneedle drug delivery systems: Biomechanical characterization and vaccine delivery*, AAPS PharmSci, Vol. 3, No. 3

Pettis, R.J., Harvey, N., Sutter, D., McFarland, A., Pollack, G., Leipmann, D., Zahn, J. (2002) *Intradermal insulin delivery via MEMS fabricated microneedles*, poster, 2002 AAPS Annual Meeting and Exposition,

Pettis, R.J., Kaestner, S., Sutter, D (2003) *Microneedle delivery of GCSF leads to unique pharmacokinetic advantages*, poster, 2003 AAPS Annual Meeting and Exposition, Salt Lake City, UH

Pettis, RJ, Kaestner, S, Sutter, D, Fentress, J, Harvey, N (2003) *Microneedle-Based Intradermal Delivery of Insulin to Diabetic Swine: A Novel Parenteral Administration Method with Unique PK/PD Outcomes*, podium, 2003 CRS Annual Meeting, Honolulu, HA

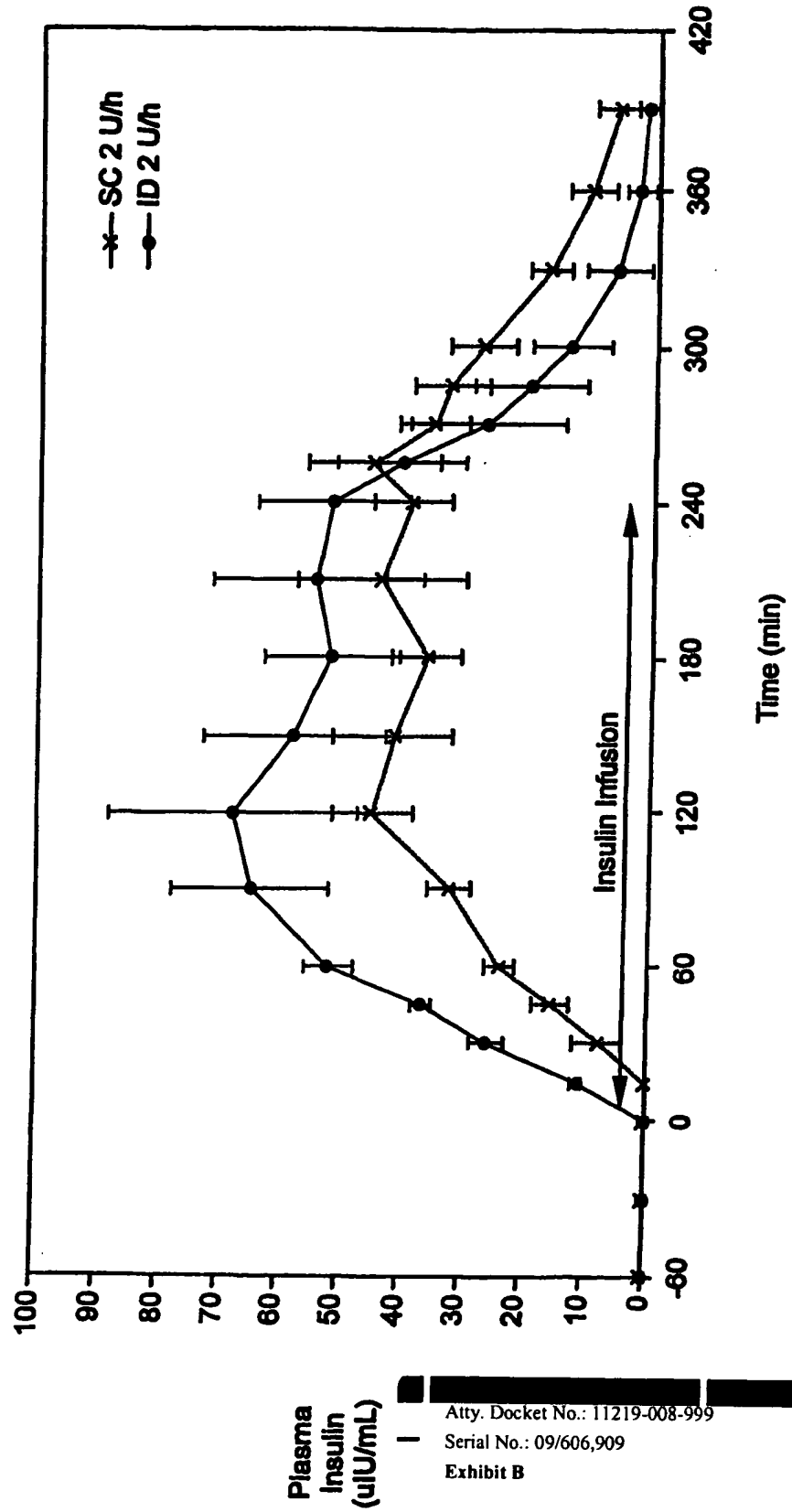
PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Member- Controlled Release Society

Member- American Association of Pharmaceutical Sciences

Member-Editorial Board, Drug Delivery Companies Report

FIG. 4



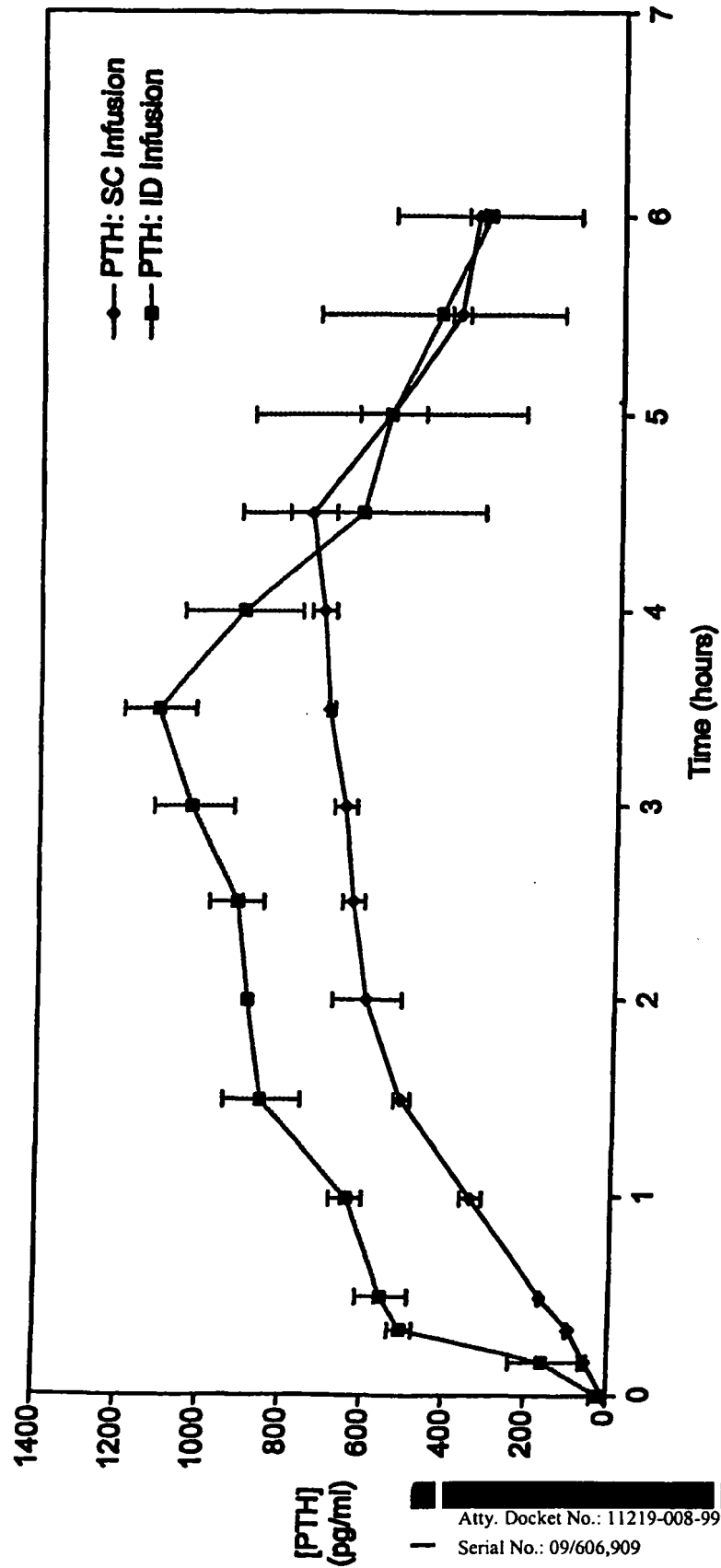
Plasma
Insulin
(uIU/mL)

Atty. Docket No.: 11219-008-999

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Exhibit B

FIG. 3



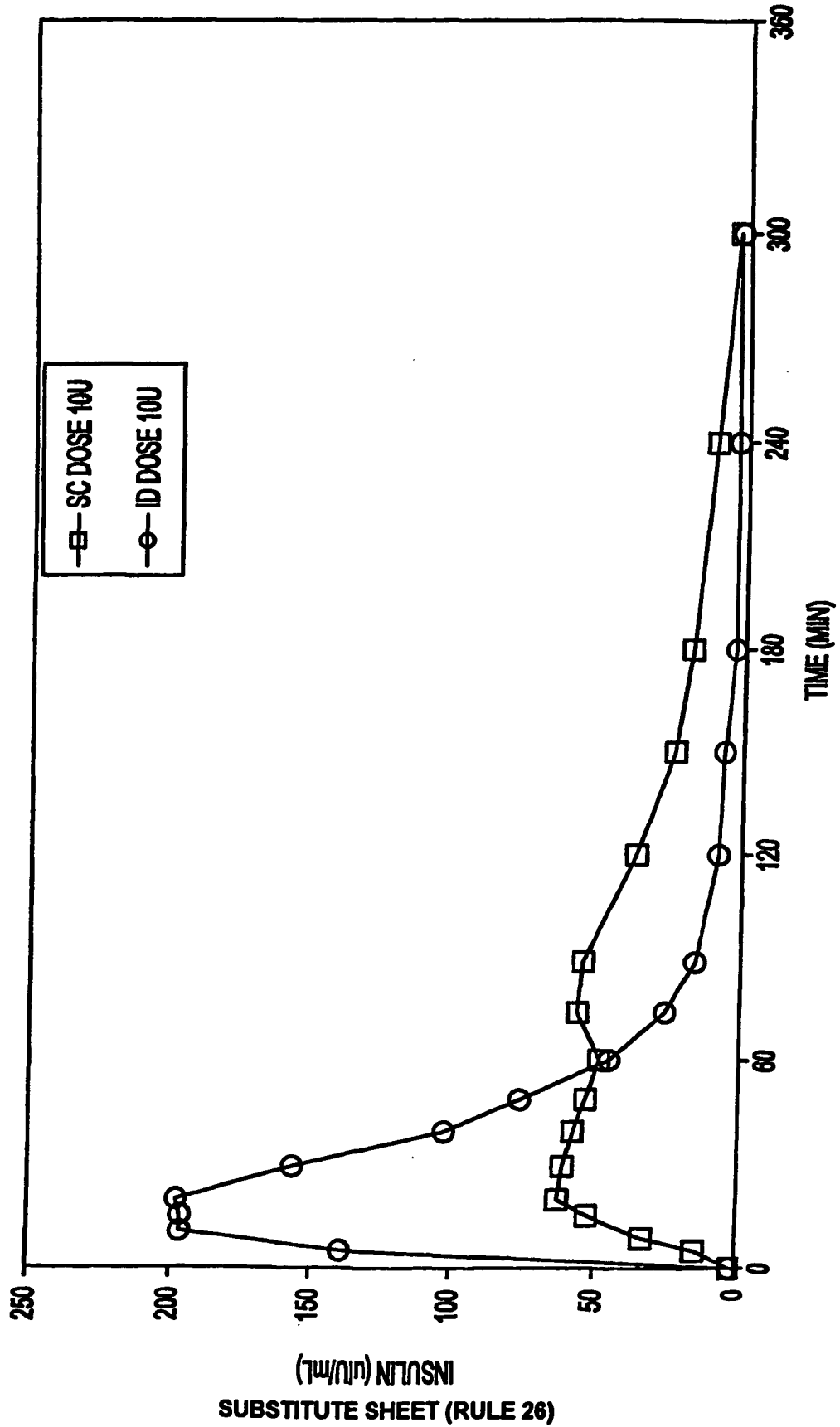


FIG. 1

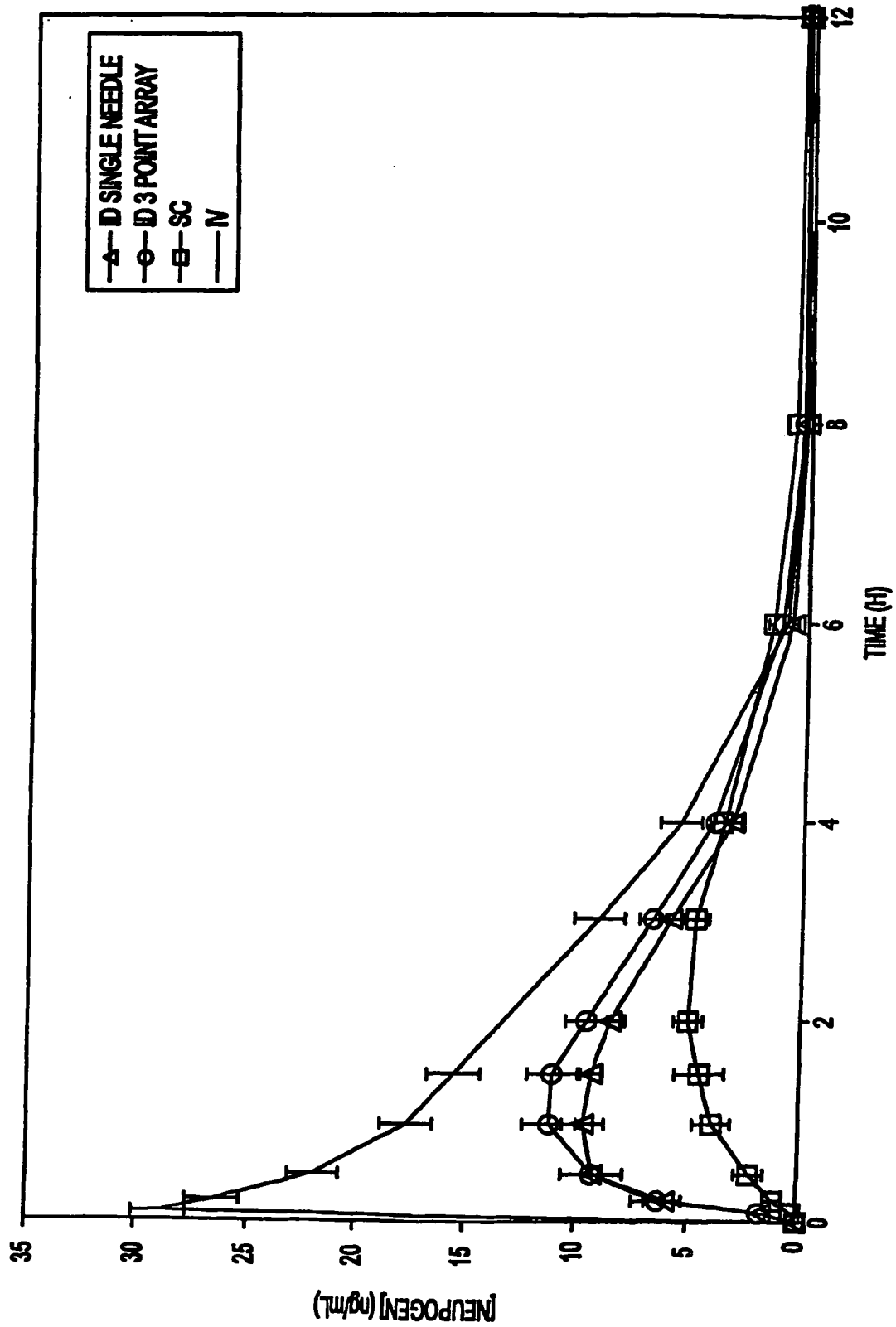


FIG. 6

SUBSTITUTE SHEET (RULE 26)

Figure 8

